Title (en)

IMMUNOGENIC COMPOSITIONS FOR USE IN VACCINATION AGAINST BORDETELLA

Title (de)

IMMUNOGENE ZUSAMMENSETZUNGEN ZUR VERWENDUNG ALS IMPFSTOFF GEGEN BORDETELLA

Title (fr)

COMPOSITIONS IMMUNOGÈNES POUR UNE UTILISATION EN VACCINATION CONTRE LES BORDETELLA

Publication

EP 3270897 A4 20181205 (EN)

Application

EP 16769416 A 20160318

Priority

- US 201562136060 P 20150320
- US 2016023160 W 20160318

Abstract (en)

[origin: WO2016154010A1] The present application relates to immunogenic compositions comprising a mixture of Bordetella (e.g., B. pertussis) antigens and an oil in water nanoemulsion. In particular, the invention provides immunogenic compositions comprising nanoemulsion and a combination of Bordetella (e.g., B. pertussis) antigens that have different functions, for example, combinations including B. pertussis adherence factors (adhesins), B. pertussis toxins or B. pertussis virulence factors. Vaccines, methods of treatment, uses of and processes to make a pertussis or whooping cough vaccine are also described. Compositions and methods of the present invention find use in, among other things, clinical (e.g. therapeutic and preventative medicine (e.g., vaccination)) and research applications.

IPC 8 full level

A61K 9/107 (2006.01); **A61K 39/02** (2006.01); **A61K 39/10** (2006.01); **A61P 11/02** (2006.01)

CPC (source: EP US)

A61K 9/0043 (2013.01 - EP US); **A61K 9/1075** (2013.01 - EP US); **A61K 39/099** (2013.01 - EP US); **A61K 39/39** (2013.01 - EP US); **A61K 47/10** (2013.01 - EP US); **A61K 47/186** (2013.01 - EP US); **A61K 47/26** (2013.01 - EP US); **A61K 47/44** (2013.01 - EP US); **A61P 11/02** (2018.01 - EP); **A61P 31/04** (2018.01 - EP); **A61P 43/00** (2018.01 - EP); A61K 2039/543 (2013.01 - US); A61K 2039/55566 (2013.01 - US); A61K 2039/57 (2013.01 - EP US)

Citation (search report)

- [I] CATPAGAVALLI ASOKANATHAN ET AL: "A CpG-containing oligodeoxynucleotide adjuvant for acellular pertussis vaccine improves the protective response against Bordetella pertussis", HUMAN VACCINES AND IMMUNOTHERAPEUTICS, vol. 9, no. 2, 1 February 2013 (2013-02-01), US, pages 325 - 331, XP055515029, ISSN: 2164-5515, DOI: 10.4161/hv.22755
- [A] A. U. BIELINSKA ET AL: "Distinct Pathways of Humoral and Cellular Immunity Induced with the Mucosal Administration of a Nanoemulsion Adjuvant", THE JOURNAL OF IMMUNOLOGY, vol. 192, no. 6, 14 February 2014 (2014-02-14), US, pages 2722 - 2733, XP055515650, ISSN: 0022-1767, DOI: 10.4049/jimmunol.1301424
- [A] RYAN ELIZABETH J ET AL: "Mutants of Escherichia coli heat-labile toxin act as effective mucosal adjuvants for nasal delivery of an acellular pertussis vaccine: Differential effects of the nontoxic AB complex and enzyme activity on Th1 and Th2 cells", INFECTION AND IMMUNITY,, vol. 67, no. 12, 1 December 1999 (1999-12-01), pages 6270 - 6280, XP002162796, ISSN: 0019-9567
- [A] JABBAL-GILL I ET AL: "Stimulation of mucosal and systemic antibody responses against Bordetella pertussis filamentous haemagglutinin and recombinant pertussis toxin after nasal administration with chitosan in mice", VACCINE, ELSEVIER, AMSTERDAM, NL, vol. 16, no. 20, 1 December 1998 (1998-12-01), pages 2039 - 2046, XP004138454, ISSN: 0264-410X, DOI: 10.1016/S0264-410X(98)00077-2
- [A] ISAKA M ET AL: "Mucosal and systemic antibody responses against an acellular pertussis vaccine in mice after intranasal co-administration with recombinant cholera toxin B subunit as an adjuvant", VAC, ELSEVIER, AMSTERDAM, NL, vol. 21, no. 11-12, 7 March 2003 (2003-03-07), pages 1165 - 1173, XP004404293, ISSN: 0264-410X, DOI: 10.1016/S0264-410X(02)00516-9
- [A] SHIM D H ET AL: "Efficacy of poly[di(sodium carboxylatophenoxy)phosphazene] (PCPP) as mucosal adjuvant to induce protective immunity against respiratory pathogens", VACCINE, ELSEVIER, AMSTERDAM, NL, vol. 28, no. 11, 8 March 2010 (2010-03-08), pages 2311 - 2317, XP026924740, ISSN: 0264-410X, [retrieved on 20100108], DOI: 10.1016/J.VACCINE.2009.12.069
- [A] HALE C ET AL: "Mucosal immunisation of murine neonates using whole cell and acellular Pertussis vaccines", VAC, ELSEVIER, AMSTERDAM, NL, vol. 22, no. 27-28, 9 September 2004 (2004-09-09), pages 3595 - 3602, XP004526939, ISSN: 0264-410X, DOI: 10.1016/J.VACCINE.2004.03.039
- [A] P?DRAIG J. ROSS ET AL: "Relative Contribution of Th1 and Th17 Cells in Adaptive Immunity to Bordetella pertussis: Towards the Rational Design of an Improved Acellular Pertussis Vaccine", PLOS PATHOGENS, vol. 9, no. 4, 4 April 2013 (2013-04-04), pages e1003264, XP055363343, DOI: 10.1371/journal.ppat.1003264
- [AP] PAMELA T. WONG ET AL: "Formulation, High Throughput In Vitro Screening and In Vivo Functional Characterization of Nanoemulsion-Based Intranasal Vaccine Adjuvants", PLOS ONE, vol. 10, no. 5, 11 May 2015 (2015-05-11), pages e0126120, XP055514988, DOI: 10.1371/journal.pone.0126120
- See also references of WO 2016154010A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2016154010 A1 20160929; EP 3270897 A1 20180124; EP 3270897 A4 20181205; JP 2018511655 A 20180426; US 2018071380 A1 20180315

DOCDB simple family (application)

US 2016023160 W 20160318; EP 16769416 A 20160318; JP 2018500270 A 20160318; US 201615560057 A 20160318